



Signal Transduction Pathways Regulated by Vascular Endothelial Growth Factor

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Message from the Guest Editor

VEGF, also known as VEGF-A, is the most well characterized member of the cysteine-knot growth factors family. Hypoxia is a major regulator of VEGF expression via hypoxia inducible factor (HIF). Then, when activated, VEGF displays several activities such as pro-angiogenic function, vascular permeability, and vasodilation. However, as largely demonstrated, these VEGF properties lead to the formation of new blood vessels, which may be structurally abnormal in the case of tumors. Moreover, alternative exon splicing on the vegf gene leads to multiple VEGF isoforms with different pro-angiogenic activities, as well as different single nucleotide polymorphisms (SNPs) in the same gene, which have been associated with a significant variability in the association with chronic diseases in humans. Therapies targeting VEGF and its signal transduction are currently available and research in this field is ongoing.





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Message from the Editor-in-Chief

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